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TCP/IP Control Panel: Syntax of Hosts File (12/96)

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TOPIC -----

Does Open Transport 1.1/TCP support a local HOSTS file?

DISCUSSION -----

Open Transport/TCP supports one or more HOSTS file, stored in the System Preferences folder, that may be used to supplement and/or customize the domain name resolver's initial cache of information. The selected file is opened and parsed when Open Transport/TCP is initialized. As with MacTCP, the supported HOSTS file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain-name> <rr> [<comment>]
```

where <domain-name> is an absolute or Fully Qualified Domain Name, and where

```
<rr> = [<ttd>] [<class>] <type> <rdata> OR [<class>] [<ttd>] <type> <rdata>
```

The only <class> currently supported is IN (Internet Domain); <ttd>, time to live, indicates the record's configured lifetime in seconds; and <type> can be A (host address), CNAME (canonical name of an alias), or NS (name server). If <ttd> is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a value of minus-one (-1). \$INCLUDE and \$ORIGIN are not supported.

Open Transport/TCP is more stringent regarding the content and format of the HOSTS file than was MacTCP, which permitted violation of the FQDN requirement for <domain-name>. For instance, this format:

```
charlie          A          128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially

exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie          CNAME  myhost.mydomain.edu
myhost.mydomain.edu  A      128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

If a HOSTS file is used, every effort should be made to keep it as small as possible and to only include entries that will be accessed frequently. This reduces the total memory footprint required to cache the DNS information and minimizes the need to maintain and update the HOSTS files as system information changes over time.

In order to activate a HOSTS file, the Advanced or Administrator mode must be used to select the desired file. The text file must already exist; it could have been created with any text editor or word processor. The HOSTS file is tied to the selected configuration. An administrator might, for example, specify different HOSTS files for use when connecting via Ethernet to the campus LAN and when dialing-in from a remote location.

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- 16 Dec 1996 - Made correction for technical accuracy.
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